REMARKS

In the Office Action mailed May 23, 2006, the Examiner rejected Claims 1-24. Claims 14 and 19 have been amended. The Examiner's consideration of the remarks below is respectfully requested.

Rejections Under 35 U.S.C Section 112

Claim 3 was rejected under 35 U.S.C. 112, first paragraph. The Examiner asserts that the patent specification fails to teach how a SCSI address would be translated into a path leading to a data location in the node based storage. This process is described in paragraphs 0037-0043, 0045, and 0046 of the present application as published in Publication Number 2005/0114402.

In paragraph 0037-0043 of the specification, it is stated that "data is stored in nodes under a naming convention associated with the portion of storage that a node resides ...of a form 'terabyte group/gigabyte group/megabyte group/submegabyte group". The group address 2/102/93/1 means that the location is in a terabyte group that is 2 terabytes away from the node, that, within the 2 terabyte group the location is in the 102nd gigabyte group, within this group it is in the 93rd megabyte group, and it is the first location within the megabyte group. Paragraphs 0038 through 0043 provide further representative translation guidelines.

In paragraph 0045, it is explained that during a SCSI read operation, a SCSI offset and size is received, which is translated into a node offset and a number of nodes using the naming convention of paragraph 0037. As explained in paragraph 0046, the write operation is performed similarly, where the SCSI offset and size are translated to the nodes to be overwritten or created.

Applicants request reconsideration and withdrawal of this rejection since the operations required by this form of addressing follow directly from the specification as shown, and one of ordinary skill in the art would recognize that the inventors had possession of the invention defined in Claim 3 when the application was filed.

Prior Art Rejections of Claims 1, 9, 10, 12, 14, and 19

The Examiner has rejected independent Claims 1, 9, 10, 12, 14, and 19 as unpatentable over Kahn alone or Kahn combined with Arnaout.

Each of these Claims either as submitted, or as amended above in the case of Claims 14 and 19, requires a node level snapshot server configured to generate snapshots of the nodes of data in the storage. This limitation is not present in Kahn, which employs a snapshot system which is operates on the block level, a block being the underlying unit of memory. In paragraph 0039, the Kahn reference recites: "The snapshot operates at the block level of the WAFL file system and represents a persistent image of the active file system at a particular point in time..." The WAFL file system and associated snapshots are described in detail in U.S. Patent 5,819,292 to Hitz, which is incorporated by reference into the Kahn patent. Hitz describes a snapshot scheme wherein snapshot data is retained on a 4K block basis. Hitz and Kahn do not utilize a node based snapshot method. The Kahn system thus has no need to translate blocks of data into snapshot nodes.

Arnaout does not cure this deficiency of Kahn. The Arnaout reference describes block level data storage, but does not address snapshots at all.

The applicant therefore respectfully submits that the rejection of these claims be reconsidered and withdrawn. Because Claims 2-8, 13, and 15-18 depend from one of independent Claims 1, 9, 10, 12, 14, and 19, it is respectfully submitted that these claims are allowable for at least the same reasons.

Prior Art Rejections of Claims 11 and 23

The Examiner has rejected independent Claims 11 and 23 as unpatentable over either Kahn combined with Arnaout or Kahn combined with Bradley. Both of these claims recite that the agents are coded to indicate a capacity allocation and that "the sum of the capacity allocations as designated being a total capacity allocation larger in size than the initial physical storage capacity of the storage."

Kahn and Arnaout do not discuss capacity allocation among agents in any way. Bradley discloses a system that allows a user to view physically available storage space and how that storage space is being used by various files or classes of files. Bradley does not contemplate producing a sum of capacity allocations larger in size than the actual physically available space as set forth in these claims. Bradley only allows monitoring of actual physical storage capacity, it does not allow allocating more storage space than physically exists to any system.

As explained in paragraphs 0047 and 0048 of the specification, the claimed feature allows the agents to "see" a large storage space for use, while allowing a system administrator to initially provide a relatively small amount of physical storage space. As the agents store more data, the administrator can grow the physical capacity of the system as space is needed in a manner transparent to the agents.

This feature is not taught or suggested by the prior art of record, and it is respectfully submitted that these claims are in condition for allowance. Claim 24 is dependent on Claim 23, and it is respectfully submitted that this claim is allowable for at least the same reasons.

Prior Art Rejection of Claim 21

Claim 21 has been rejected as anticipated by Kahn. However, the Examiner has pointed to no portion of Kahn that discloses several limitations of Claim 21. Such limitations include the first and second initiators, first and second root directories, pointing the first root directory to a first collection of nodes and pointing the second root directory to the first snapshot, as well as other limitations of this claim.

It is respectfully submitted that Claim 21 is patentable over Kahn and the other prior art of record.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

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By: _____

Thomas R. Arno
Registration No. 40,490
Attorney of Record
Customer No. 20,995
(619) 235-8550

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